



Measuring Efficiency, Effectiveness, and Business and Public Safety Value

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Face Recognition Hollywood Style

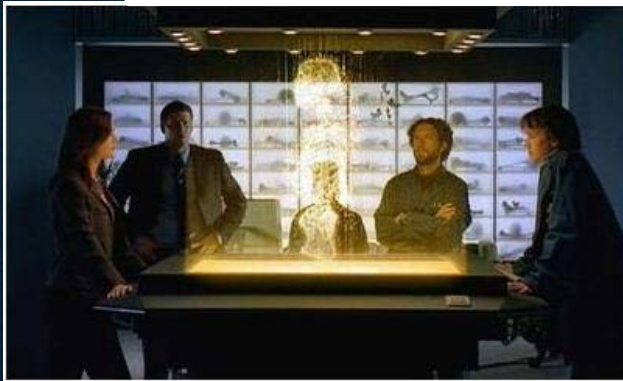


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Face Recognition Hollywood Style



*BONES | © 2017 Kevin Estrada/FOX
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Face Recognition

What it *really* looks like.



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Science & Research

NIST



- National Institute of Standards and Technology
 - FR Vendor Test - 2018
 - Algorithm Upgrades - 2019
 - FRVT Ongoing – summer 2019
- West Virginia University Cooperative Agreement with Florida Institute of Technology and Notre Dame
 - Performance variances of FR algorithms across demographic groups – 2019



CJIS FR Programs



Next Generation Identification –
Interstate Photo System (NGI-
IPS)

Facial Analysis, Comparison, and
Evaluation (FACE) Services Unit



Next Generation Identification Interstate Photo System



- Next Generation Identification - Interstate Photo System (NGI-IPS) is a repository of all photos associated with a tenprint fingerprint submission
- Dependent upon law enforcement to submit photos with a criminal arrest to build volume
- Authorized law enforcement may submit up to 25 photos per transaction
- Quality mug shot submissions are important



NGI-IPS Current State

Current State

- Criminal mug shot photos– over 36.9M
- Unique Identities – Over 17M

Who is connected (17 states/agencies are conducting FR search of IPS)

FBI FACE Services, Michigan, Arkansas, Texas, Maine, New Mexico, Delaware, DC Metro, South Carolina, West Virginia, Arizona, Louisiana, Hawaii, Kentucky, Iowa, Missouri, and Colorado

Connectivity Status (9 States not submitting criminal mugshots)

Alaska, South Dakota, Mississippi, Rhode Island, Connecticut, North Dakota, Ohio, Montana, and Minnesota

Future Connectivity

Massachusetts



FACE Services Unit



The FACE Services Unit:

- Provides investigative leads to the FBI Field Offices through the use of face recognition
- Supports FBI active investigations and assessments
- Searches selected databases both internal and external to the FBI

NOTE: *The FACE Services Unit does NOT provide 1:1 identifications*



1 to Many Comparison

Universal Face Workstation (UFW) - One To Many

File Edit Window Help

Case presentation photos - Workflow 7 (8)

Q Q Prote UCN: Unknown

1 1 401905 1/1
UCN: K37PL491M (105)

2 2 12117 1/1
UCN: K37PL491M (105)

3 3 16727 1/1
UCN: K37PL491M (105)

4 4 11677 1/1
UCN: K37PL491M (105)

5 5 11408 1/1
UCN: K37PL491M (105)

6 6 3534 1/1
UCN: K37PL491M (105)

7 7 2702 1/1
UCN: K37PL491M (105)

8 8 2077 1/1
UCN: K37PL491M (105)

9 9 2077 1/1
UCN: K37PL491M (105)

10 10 2515 1/1
UCN: K37PL491M (105)

11 11 2364 1/1
UCN: K37PL491M (105)

12 12 2341 1/1
UCN: K37PL491M (105)

13 13 2334 1/1
UCN: K37PL491M (105)

14 14 2306 1/1
UCN: K37PL491M (105)

15 15 2085 1/1
UCN: K37PL491M (105)

16 16 2266 1/1
UCN: K37PL491M (105)

17 17 2202 1/1
UCN: K37PL491M (105)

18 18 2164 1/1
UCN: K37PL491M (105)

19 19 2110 1/1
UCN: K37PL491M (105)

20 20 2148 1/1
UCN: K37PL491M (105)

21 21 2139 1/1
UCN: K37PL491M (105)

22 22 2106 1/1
UCN: K37PL491M (105)

23 23 2094 1/1
UCN: K37PL491M (105)

24 24 2088 1/1
UCN: K37PL491M (105)



Human Review



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NGI-IPS Likely Candidate Report



Report Information

Report Number: 61056905-042702016-132751
Case Number: 122591265
Submission Date: 04/27/2016
Priority: 3 -- Routine
ORI: WVFBIO100
TCN: E201611800000140263
TCR: 0122595638

Results: Considered Candidate
Rank: 4
Match Score: 11677
UCN: 1HE6NCLN6
Image Request: No
Prepared By: macarvelli (EID: 61056905)
13:27:51 04/27/2016

PROBE



CANDIDATE





Training & Best Practices

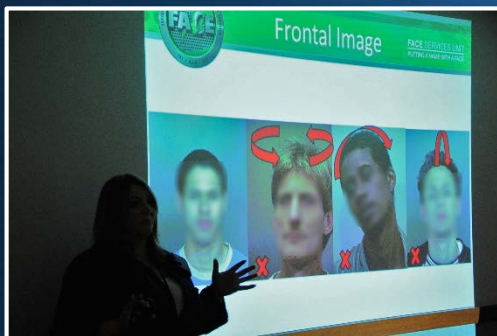
- FBI created the Facial Identification Scientific Working Group (FISWG) – www.fiswg.org
 - Mission – “Develop consensus standards, guidelines, and best practices for the discipline of image-based comparisons of human features.”
 - “Guidelines and Recommendations for Facial Comparison Training to Competency”
- Organization of Scientific Area Communities (OSAC) Facial Identification Subcommittee’s standards and guidelines
- NGI Policy Implementation Guide





Biometric Training

Face Comparison and Identification Training (FCIT) Universal Face Workstation (UFW) Training



Examples of FACE Services specialized training include:

- Photoshop Training
- Bone Structure
- Musculoskeletal
- Facial Analysis
- Facial Comparison
- Ear Comparison
- Drug Effects
- Age Progression
- Aging & Facial Alterations
- Universal Face Workstation (UFW)



FACE Services Success

PITTSBURGH FIELD OFFICE

FUGITIVE: Violent Criminal – Unlawful Flight to Avoid Prosecution

- Sentenced October 28, 2015
- Coordinated efforts with the FBI and ten law enforcement agencies

Likely Candidate Photos



Pennsylvania Driver's License



Arkansas Department of
Finance & Administration



Mug Shot Photo